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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,966	10/12/2001	Tadashi Takeuchi	Q66516	8112

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2100 Pennsylvania Avenue, N.W.
Washington, DC 20037

EXAMINER

KOVAL, MELISSA J

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 12/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/974,966

Applicant(s)

TAKEUCHI, TADASHI

Examiner

Melissa J Koval

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-14 and 16-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 11, 12, 14 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 8-10 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. 6) ☐ Other: _____

DETAILED ACTION

Drawings

Applicant has failed to provide a proposed drawing correction in response to the office action of February 11, 2003.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show casing 10 as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the casing 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it exceeds 150 words.

Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because of the following informalities: On page 10, line 19 of the specification, casing 10 is referred to with respect to Figure 4, but it is not shown in the Figure.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 7 is rejected under 35 U.S.C. 102(b) as being anticipated by Biscardi et al. ('417).

Refer to Figure 2 of Biscardi et al., for example.

Claim 7 sets forth: "A rear projection television comprising:

a casing (housing 14) having a projection screen (panel 10), said projection screen constituting a front face of said casing;

a projector provided within said casing for emitting a light beam containing an image information (projector 60); and

an end side final stage reflection mirror provided within said casing in the vicinity of an end portion of said projection screen (light redirection element 32 adjacent inlet face 20),

wherein said end side final stage reflection mirror reflects said light beam emitted from said projector toward a whole rear surface of said screen, and

said end side final stage reflection mirror is arranged such that an optical axis of said light beam incident on said end side reflection mirror is slanted toward said screen to gradually reduce a distance between said optical axis and said screen,

wherein a depth size of said casing is one fifth a diagonal size of said screen or smaller".

Refer to column 3, lines 35 through 49, wherein dimensions of height and width of the television and depth of the housing are given. Based on these dimensions, the following limitation: "wherein a depth size of said casing is one fifth a diagonal size of said screen or smaller" is met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biscardi et al. ('417)

Claim 1 sets forth: "A rear projection television comprising:

a casing (housing 14) having a projection screen (panel 10), said projection screen constituting a front face of said casing;

a projector provided within said casing for emitting a light beam containing an image information (projector 60), and

an end side final stage reflection mirror provided within said casing in the vicinity of an end portion of said projection screen (light redirection element 32 adjacent inlet face 20),

wherein said end side final stage reflection mirror reflects said light beam emitted from said projector toward a whole rear surface of said screen,

said end side final stage reflection mirror is arranged such that an optical axis of said light beam incident on said end side reflection mirror is slanted toward said screen to gradually reduce a distance between said optical axis and said screen,

wherein an angle between a surface of said end side reflection mirror and said surface of said screen is in a range from 70 degrees to 120 degrees".

Although the teaching of Biscardi et al. is silent to the specific angular relationship between the surface of light redirection element 32 and panel 10, one can see from Figure 1 that the claimed relationship, i.e. "wherein an angle between a surface of said end side reflection mirror and said surface of said screen is in a range from 70 degrees to 120 degrees" could be met by Figure 1 of Biscardi et al. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make such a specific angular relationship between the light redirection element 32 and panel 10 thus meeting the limitations of claim 1. The motivation for one having ordinary skill in the art to create such an angular relationship would be to create the desired dimensions of the rear projection system.

With respect to claims 2, 11 and 12, refer to column 4, lines 11 and 12.

With respect to claim 3, again refer to light redirection elements 32.

With respect to claim 5, refer again to Figure 1 of Biscardi et al. The limitations of claim 5 could be met at some point along the surface of the panel 10 at the inlet face 20. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make such a specific angular relationship between the light redirection element 32 and panel 10 thus meeting the limitations of claim 1. The motivation for one having ordinary skill in the art to create such an angular relationship would be to create the desired dimensions of the rear projection system.

Claims 14 and 16 through 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchiyama ('855) in view of Negishi et al. ('266).

Uchiyama et al. teach all of the limitations set forth in claim 14 except for a focusing optical part comprised of a plurality of focusing mirrors. The optical system 7 of Uchiyama is structured differently and can be seen in Figure 1, for example.

However, a focusing optical part comprised of a plurality of mirrors is well-known in the art as shown by Negishi et al. in the embodiment of Figure 6.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one type of optical system, that shown by Negishi et al., for another, that shown by Uchiyama, in a rear projection system, thus meeting the limitations set forth in claim 14. The motivation for one having ordinary skill in the art to make such a modification would be to implement a rear projection display apparatus reduced in thickness.

With respect to claims 16 through 19, refer to Figure 6 of Negishi et al. Also refer to column 41, lines 6 through 30.

Allowable Subject Matter

Claim 6 is allowed.

Claims 8-10, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record neither shows nor suggests a rear projection television having all of the elements of claim 1 and further comprising a screen having a construction including a full type Fresnel lens and a lenticular lens laminated on the Fresnel lens as in claim 8 and dependent claims 9 and 10. Nor does the prior art of record show or suggest a rear projection television having all of the elements of claim and also comprising a group of micro reflection mirrors.

Response to Arguments

Applicant's arguments filed August 11, 2003 have been fully considered but they are not persuasive. With respect to applicant's arguments regarding claim 14, the examiner asserts that both Uchiyama and Negishi et al. suggest a method for rear projection wherein an incident angle of the light beam projected on said screen may be 45 degrees or more. Nor is it necessary for Negishi et al. to show the following to make

the combination of Uchiyama in view of Negishi et al. successful in overcoming the limitations of claims 14 through 19: "1) the light beam that is incident on a final stage reflection mirror of said reflection mirrors is slanted toward screen, and 2) the light beam is projected on a screen at an incident angle of 45 degrees or more".


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J Koval whose telephone number is (703) 308-4801. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell Adams can be reached on (703) 308-2847. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MJK


RUSSELL ADAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800